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BILL HASLAM
Governor

TO: Dr. David Gregory
Acting Chancellor, Tennessee Board of Regents

FROM: Russ Deaton 

SUBJECT: East Tennessee State University
Letter of Application to Plan Rehabilitation Science, BS and PhD
Programs

DATE: February 1, 2016

In accordance with THEC policies, colleges and universities are required to submit Letters of Application for authorization to proceed with developing proposals for new academic programs and units. The THEC financial projection form for the proposed program must accompany the letter of application to plan. Upon THEC approval to proceed with developing proposals, institutions should do so in a manner consistent with THEC policies and criteria.

Programs must document relevance to institution's mission, provide enrollment, graduation and financial projections, describe the anticipated evaluation process, document employer and student demand, and certify that the proposed program will not unnecessarily duplicate existing offerings at other Tennessee public institutions. The proposal must ensure faculty sufficiency, existence of student support resources, and adequacy of library, space, equipment, and technology.

I approve East Tennessee State University to plan the Bachelor of Science in Rehabilitation Science. It is understood that the proposed BS program will be in accord with the mission at ETSU, will meet the *THEC 2015-25 Master Plan for Tennessee Postsecondary Education* degree completion and workforce development objectives, and will be implemented with existing funds. The THEC staff will consider a letter of application for the Rehabilitation Science PhD program after the BS program has been successfully implemented.

The Letter of Intent projects implementation of an approved Rehabilitation Science, BS program in August 2017. Please be advised that the Letter of Application itself will be posted on the THEC website for public disclosure.

cc: Dr. Tristan Denley, TBR
Dr. Brian Noland, ETSU
Dr. Bert Bach, ETSU
Betty Dandridge Johnson, THEC



TENNESSEE BOARD OF REGENTS
Academic Proposal Form for All New Programs

COVER PAGE

This form is submitted with all proposals requiring Board approval to the TBR Vice Chancellor for Academic Affairs. The COVER PAGE may be submitted as a PDF. All other forms should be submitted as MSWord documents.

Please remember to submit only one proposal with related support documents per e-mail.

Sponsoring Institution(s): East Tennessee State University

Proposal Statement: Letter of Intent for a new degree program

Degree Designation [or] Type of Certificate:

B.S. in Rehabilitation Sciences
Formal Degree Abbreviation Title of Proposed Program to be established or impacted

Concentrations: (if applicable) None

Anticipated Delivery Site(s): On campus

Proposed CIP Code: 51.2314

Proposed Implementation Date: Fall 2015

Cooperative/Collaborative Partners: NA

For more information contact: Bert C. Bach, Provost
Name

423.439.4219
Telephone

Institutional Approval: Brian Roland W. Fisher 16-15-14
Signature of President (required) Date

The Cover Page documents the President's support and that the proposal has been reviewed and approved through the established institutional processes. Collaborative programs require the President's signature from all participating institutions.

**Letters of Intent for Proposed New Academic Program
East Tennessee State University
College of Clinical and Rehabilitative Health Sciences
Department of Physical Therapy**

Proposed Program

Degree Designation and Program Title: Bachelor of Science in Rehabilitative Science

Proposed Concentrations: None

CIP Code: 51.2314

A program that focuses on human function, disability, and He from the perspectives of the health sciences, social sciences, psychology, engineering, and related fields. Includes instruction in psychological, social, and cultural aspects of disability and rehabilitation; sensory and motor function and dysfunction; biomechanics and kinesiology; assistive technology; rehabilitation instrumentation and methodology; statistics; and health and rehabilitation policy (CIP Definition).

Proposed Implementation Date: Fall 2017

This letter of intent outlines the request for creation of a Bachelor of Science degree in Rehabilitative Science in the College of Clinical and Rehabilitative Health Sciences (CCHRS) at East Tennessee State University. CCHRS has established programs in a variety of health related disciplines including speech/language pathology, audiology, physical therapy, cardiopulmonary science, and radiography; thus making it well suited for an undergraduate degree program in Rehabilitative Science. The proposed program will address the growing demand for rehabilitative specialists in health care by providing a pathway to a wide range of career options in health and rehabilitative fields, facilitating timely and sequential completion of all pre-requisite courses, preparing graduates with the skills to work in health-related occupations. Exposure to faculty from numerous health related disciplines will further assist students in making a well-informed decision in choosing their ultimate career paths upon graduation. Graduate school opportunities include physical therapy, occupational therapy, medical school, audiology, speech/language pathology and physician assistant programs. Employment opportunities exist in many rehabilitative settings and include opportunities in cardiac rehabilitation, rehabilitation and residential management, as vocational, independent living, and protection and advocacy specialists, case managers, and in hospital, university and community based health & wellness programs. See Appendix A for graduate school and employment opportunities.

Mission Compatibility

How will the proposed program further the mission of the institution?

ETSU's mission statement highlights the need to "provide strong, comprehensive educational, research, and service programs in the health sciences that advance the health and wellness of people throughout Tennessee and Southern Appalachia and of rural populations around the world." The strategic plan for the Bachelor of Science degree in Rehabilitative Science speaks to the promise of ETSU's mission and its commitment to excellence in teaching, research, and public service in the health sciences through its inclusion of well-established and fully-accredited undergraduate and graduate programs in radiography, cardiopulmonary science, audiology, speech/language pathology, and physical therapy.

As the Academic Health Sciences Center in the Tennessee Board of Regents system, students will be able to base their career-oriented decisions on greater exposure to the actual practice of the professions rather than being premised on ideals. Having all of the programs mentioned above within the college will allow students to have increased exposure to other students and faculty from multiple disciplines, which is reflective of current clinical practice.

Reinforcement based on actualities of each health-related profession will help solidify decisions and subsequently allow students to remain focused on their goals, increasing the likelihood of success. Programs and initiatives in each of the clinical areas mentioned in the introduction to this proposal are firmly established and implemented according to best practice principles throughout the college. The Bachelor of Science degree in Rehabilitative Science will prepare students for graduate study in physical therapy, occupational therapy, audiology, and speech/language pathology. The exposure to faculty and students of the different disciplines throughout the course of study will additionally prepare students for inter-professional teamwork in health care early in their academic careers as they develop the skills to work in a wide range of health careers.

How will the program meet the priorities of the State Master Plan for Higher Education and follow the directives of the Complete College Tennessee Act of 2010 relative to increased degree production?

The proposed program also meets many of the outlined goals of the state's Higher Education Master Plan and the Complete College Tennessee Act of 2010.

The Higher Education Master Plan calls for increased degree attainment and an annual growth rate of 3.5% (an additional 26,000 degrees by 2015) incorporating programs that meet the needs of underserved students and undersupplied occupations. The Higher Education Master Plan also addresses a need for competition for quality education through the adoption of new approaches and instructional models. Establishing a Bachelor of Science in Rehabilitative Science serves all three of these needs.

In light of current health care trends, the aging population, advances in medical technology, and increasing numbers of Tennesseans acquiring insurance starting in January 2014 more employment opportunities are being created within the health care environment. The proposed Bachelor of Science in Rehabilitative Science will be designed to meet this growing demand for health care professionals and provide uniquely qualified students trained to practice in a continually evolving inter-professional environment.

Students of the proposed program will have access to a wealth of educational opportunities through interactions with inter-professional faculty. After completing a Bachelor of Science in Rehabilitative Science, students will have a foundation based in course work and field experiences needed to be successful when advancing to a graduate program in Rehabilitative Science.

There are currently no undergraduate degree programs in Rehabilitative Science in the state of Tennessee. The proposed Bachelor of Science in Rehabilitative Science will serve the entire state, and due to its inter-professional nature will afford ETSU a unique opportunity to be innovative in its offering.

Opportunities for health care professions and careers are recognized as one of the leading career and job opportunities of this decade (<http://www.bls.gov/ooh/healthcare/home.htm>). The proposed program will better prepare students for entry into graduate educational programs. Many of the graduates of the program will go on to pursue graduate education in discipline-specific programs such as physical therapy, occupational therapy, audiology, and speech/language pathology. The proposed program will also prepare students for advanced degree programs in rehabilitative counseling, rehabilitative technology, wellness and human performance, physician assistant studies, prosthetics and orthotics and other areas of health care. In addition a Bachelor's Degree in Rehabilitative Science may lead to opportunities with non-profit organizations, state and federal government, and private for profit companies. Such opportunities may include careers as rehabilitation managers, vocational specialists, case managers, program managers, independent living specialists, protection and advocacy specialists, and residential managers.

The Complete College Tennessee Act of 2010 called for the institutions of higher learning in Tennessee to consider the following: 1) addressing the state's economic development, workforce development and research needs; 2) ensuring increased degree production within the state's capacity to support higher education; and 3) using institutional mission differentiation to realize statewide efficiencies throughout institutional collaboration and minimized redundancy in degree offerings, instructional locations, and competitive research (<http://tn.gov/thec/complete college tn/ccta summary.html>). This degree program will satisfy all of these central themes.

1. Addressing the State's Economic Development, Workforce Development and Research Needs

A tremendous demand for rehabilitative professionals in Tennessee and the nation exists, with current and future shortages reported by the Bureau of Labor and Statistics, Section C, Program Need. An undergraduate Rehabilitative Science program will support workforce development needs by creating, sustaining, and retaining a viable workforce that will provide mutual benefit to both individuals and society. Through teaching and research, the program will promote economic development through the creation, absorption and dissemination of knowledge as it prepares students for post-graduate professional study and/or to enter the workforce.

2. Ensuring Increased Degree Production

The program will combine core courses with a curriculum specifically designed to meet the needs of students entering the fields of audiology, speech/language pathology, occupational therapy, and physical therapy. Having all of the prerequisites housed in one program will facilitate timely degree completion while also providing students flexibility as they enter into the workforce or pursue post-graduate studies.

3. Institutional Collaboration and Minimized Redundancy

The College of Clinical and Rehabilitative Health Sciences includes many established, fully accredited professional programs that have a rehabilitative focus, making a Bachelor of Science Program in Rehabilitative Science program a logical next step and a key growth area for ETSU. Interdisciplinary approaches are being increasingly incorporated to capture the interconnectedness of knowledge for undergraduate education that will prepare students to solve problems with real world relevance. The college is well positioned to offer an interesting selection of undergraduate courses that will encourage collaborative activities across disciplines for faculty and students, and subsequently minimize instructional and research redundancy.

How will the program meet the goals of the system and institutional strategic plans?

Category	ETSU Strategic Goals and Program Contributions
Access	<p>ETSU will increase access to and participation in its educational programs.</p> <p>Key and gateway courses with high enrollment demand will be identified and efforts will be made to expand capacity to meet that demand. Courses will additionally be offered in the summer to help reduce time to degree. This program will be delivered by mixed mode, with some courses delivered at ETSU's campus and some completed by a distance option, thus enhancing access to all students. With two additional full-time faculty members to support the needs of a Bachelor of Science in Rehabilitative Science, greater access to required and elective courses will be ensured.</p>
Student Success	<p>ETSU will increase persistence to graduation and the number of graduates while maintaining high academic standards.</p> <p>Experience with students declaring an interest in pre-physical therapy, pre-occupational therapy, and pre-speech/language pathology over the past 10 years has demonstrated a high yearly attrition rate of approximately 30-35%. With regard to career choices, the more remote the decision-making occurs from actual practice, the greater the choice is premised on ideals, rather than actualities of the occupation. Forming an identity with an occupation involves a process of reconciling the 'conception of practice' with 'what is experienced' through engaging with the occupation. The program curriculum will contain a three-credit hour course entitled: 'Introduction to Rehabilitative Professions.' This course will provide an introduction to the specialty areas in rehabilitation through lecture, discussion and fieldwork experiences. Students who have a greater knowledge of what constitutes the occupation in practice and its requirements are more likely to make informed decisions and to persist in completing their degree program. The proposed program will allow students to better identify with professional goals from the beginning of their academic careers by allowing them to identify with their chosen vocation through greater access (i.e., observation, partial participation, and interaction with different rehabilitative disciplines).</p>

Students will be assigned an academic advisor specific to their program of interest in order to align advising with teaching, program learning goals, and career objectives. Opportunities will be available for interested students to work with faculty on research projects and to participate in various service learning projects. These initiatives will provide students ongoing direction while also fostering a sense of belonging to an educational community.

Both college as well as university supported programs are in place to track, monitor, and support student success. As a leading distance education provider, the College of Clinical and Rehabilitative Health Sciences has a well-developed network of online resources and communication tools in place to support students throughout their studies. Students will also have available to them university resources such as learning support (LS) in selected general education courses, participation in DegreeWorks to help track student progress toward graduation, and participation of both faculty and students in the ETSU Identity team to promote ETSU pride and identification with the university. We believe that graduates of the Bachelor of Science in Rehabilitative Science at ETSU will be well-positioned to compete effectively for admission to professional graduate programs as well as for the best jobs in the rehabilitation areas. We expect that most of the graduates will go on to graduate school.

Quality

ETSU will support and enhance scholarship through research, service and creative activity.

ETSU is exceptionally positioned to provide an undergraduate program in Rehabilitative Science. The uniform strength of the existing fully accredited undergraduate and graduate programs in radiography, dental hygiene, speech/language pathology, audiology, cardiopulmonary sciences, and physical therapy provides an outstanding base of operations for the proposed program. Moreover, ETSU has a tradition of research and clinical collaboration across allied health departments as well as within the Division of Health Sciences that is unique, in many respects to ETSU. The program will provide increasing opportunities for ETSU undergraduates to participate in faculty-guided research, service-learning, engaged public scholarship, and leadership opportunities.

Resourcefulness & Efficiency

ETSU will advance a culture of stewardship that promotes the wise use of resources.

There are currently no other Bachelor of Science in Rehabilitative Sciences degree programs in the state of Tennessee. ETSU is well positioned to be innovative in the offering of this program. Combining the strengths of faculty from each of the different programs within the college will increase resourcefulness and efficiency. The program will promote interprofessional collaboration and research while maintaining fiscal responsibility through participation of current faculty. The proposed program in Rehabilitative Science will complement existing programs, and provide Tennesseans with a unique, unduplicated opportunity for interprofessional education and training in rehabilitative sciences that is

consistent with the Academic Health Sciences Center Strategic plan. In particular, we will be able to offer courses and/or include course content of an interprofessional nature that institutions without a health sciences division can not.

TBR mission statement (2010-2015) Strategic Plan

The proposed Bachelor of Science in Rehabilitative Science will support the ETSU Strategic Plan 2010-2015 and the TBR mission statement (2010-2015 Strategic Plan) through excellence in its educational programs, outreach, and innovation and judicious use of resources.

Excellence in its educational programs: The proposed degree program will provide increased opportunities for entry into post professional degree programs in high demand. The primary goal of the Bachelor of Science in Rehabilitative Science is to ensure attainment of skills and knowledge that will prepare graduates for discipline specific graduate programs in physical therapy, speech/language pathology, audiology, occupational therapy, and physician assistant. Students will be prepared for advanced training in cardiac rehabilitation and/or teaching (elementary, high school, college). Students may find employment in community, clinical and hospital based programs (e.g. rehabilitation management, vocation specialists, independent living specialists, and health/wellness programming in hospital, university, hotel or recreational settings).

Outreach: The program will provide access to all areas of the state and specifically Northeast Tennessee. Tennessee currently has no other Bachelor of Science in Rehabilitative Sciences program.

Through innovation and judicious use of resources: This program will share faculty, space and equipment resources. In doing so it will allow students to embark upon the tradition of interdisciplinary education early in their academic careers. The strength of the participating programs within the college combined with the truly interdisciplinary nature of service learning and research at ETSU creates an institutional setting for the proposed program that we feel is unmatched anywhere else in the state of Tennessee.

Will the program require the addition of a new organizational unit and, if so, what is the nature of the unit?

The program will be housed in the Department of Physical Therapy and directed by the Physical Therapy Chairperson, Dr. Patricia King.

Will establishment of the program require a SACS Substantive Change Review and, if so, what is the scope of the substantive change?

This degree is a substantive change for ETSU, and the university must notify SACS of its development and submit a prospectus three months prior to implementation.

Program Need

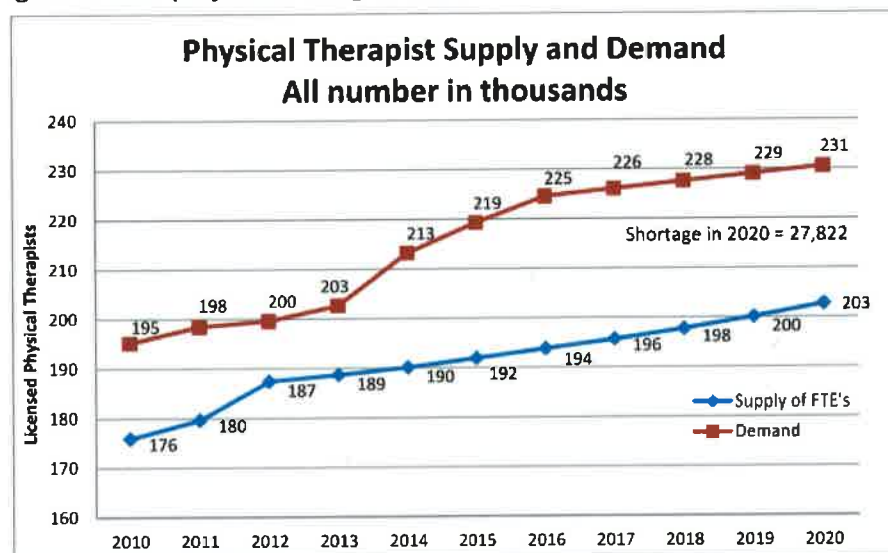
What academic, workforce development, and/or research needs will the program meet? Cite employment projection and supply/demand data appropriate to the discipline and degree level as justification. Cite THEC supply/demand analyses as appropriate for degree or certificate field.

Need	Comments
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Academic

Expansion of academic programs is necessary to serve the large geographic area of the state. The proposal recognizes the nation's growing and continuing need for rehabilitation professionals in the delivery of health care services, both regionally and nationally. As can be seen in figure 1, using an attrition rate of 3.5%, a shortage of 27,822 physical therapists is projected by 2020. Similar trends are noted for Occupational Therapy and the 2008 research report *Educator Supply and Demand in the United States*, published by the American Association for Employment in Education, indicates that speech/language pathology is one of 14 fields with a "considerable shortage." These data are an indicator that the job market for school-based Speech/Language Pathologists will be strong in future years. (report available at www.aeee.org/, under "Research/Grants.")

Figure 1: 2013 projection using an attrition rate of 3.5%



(PT Supply Demand Model Summary 2013. American Physical Therapy association. Last updated 10/8/2013).

Physical Therapy Assistants receive training from associate degree programs. Approximately 10% of Physical Therapy Assistants decide to continue or resume their education to become physical therapists. The Bachelor of Science degree in Rehabilitative Science will offer Physical Therapy Assistants the opportunity to gain advanced knowledge in areas within (e.g., pediatrics, geriatrics, lifespan development) or related to physical therapy (e.g., business administration, education) and/or prepare them to apply to a graduate program in physical therapy. (<http://www.apta.org/PTA/Careers/PTtoPT/>).

Workforce
Development/Research
Needs

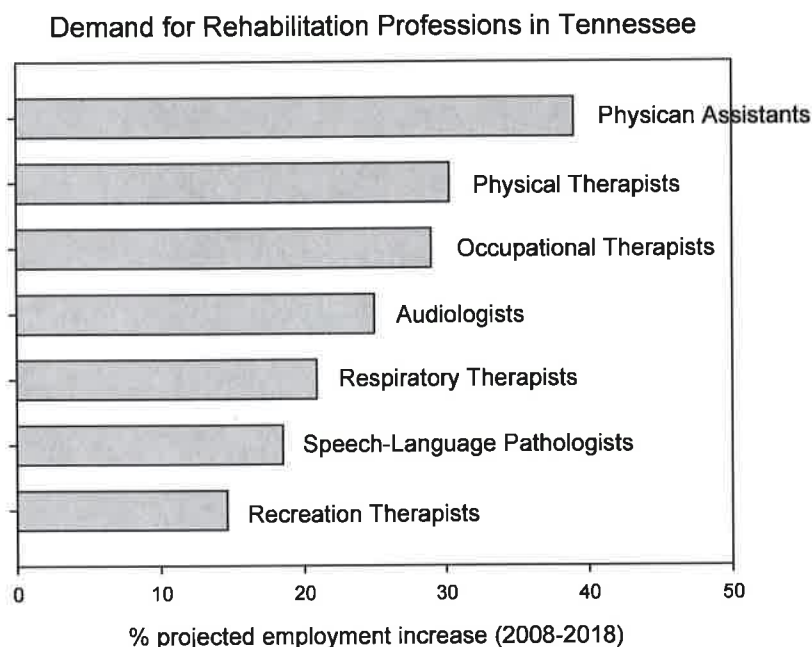
Today, rehabilitation is increasingly being seen as an essential part of the care pathway and as a sector that supports better integration with other parts of the care continuum (i.e., home care, long term care, mental health, community-based care). An increase in the number of graduates with degrees in rehabilitative science will meet the workforce needs by ensuring more appropriate use of complex care coordination and rehabilitative services along the care continuum. The graduate with a Bachelor of Science in Rehabilitative Science can be considered a “generalist” who has a distributed skill set across many health related and management disciplines. The multi-disciplinary nature of this degree regardless of concentration area selected will allow students to serve the needs of the state in many areas including, but not limited to, wellness and human performance, assistive technology, rehabilitation management, pathokinesiology in rehabilitation, and psycho-social issues in rehabilitation and personal care (International recruitment of health personnel: draft global code of practice [EB126/8]. Geneva, World Health Organization, 2009c).

Employment
Projection

The proposed degree program will provide the opportunity to work across a range of occupations. In its 2013 report, the Tennessee Division of Rehabilitation Services reported an 8.94% vacancy in its 626 allocated positions. Of these 626 total positions, it is projected that 40% of vacancies will occur within the next 5 years as employees of the Division of Rehabilitation Services meet requirements for full retirement benefits (https://www.tn.gov/humanserv/rehab/2013_stateplan_draft.pdf).

Although government budget cuts and consumer economic concerns have cut some hospital jobs, according to the Brookings Institute report, health care employment nationwide has grown more than 10 times as fast as the economy as a whole over the past decade, expanding 22.7 percent, or 2.6 million jobs nationwide, from 2002 to 2012. Across Tennessee, Brookings found that health care represented a bigger part of the economy in all of the state's major urban areas. Health care accounted for 11.4 percent of jobs in Knoxville, 11.1 percent in Nashville, 10.9 percent in Memphis and 10.6 percent in Chattanooga (<http://www.brookings.edu/research/topics/health>). The table below shows the 2008-2018 National Bureau of Labor Statistics Projections of Supply and Demand in the Allied Health Professions.

(continues next page)



(Health Care Employment Projections: An Analysis of Bureau of Labor Statistics Occupational Projections, 2010–2020)

THEC Supply/Demand Analysis

The THEC supply and demand analysis provides a positive outlook for growth in the area of healthcare, with seven of the top fifteen and fourteen of the top fifty fastest growing programs being in the healthcare profession. An increase of approximately 10,400 graduates in the health profession and related clinical sciences (CIP 51) is anticipated between 2008 and 2018, representing a 6.8 percent compounded annual growth rate (THEC, Academic Program Supply and Occupational Demand Projections: 2008-2018, April 2011). Many of these graduates who enter the workforce at the Bachelor's degree level will have the opportunity to serve across a range of health related occupations. This program will provide access to academic excellence in healthcare through an educational experience that is comprehensive in nature and tailored to each student's academic and career goals. The proposed program combines core courses with a major curriculum specifically designed to meet the needs of students entering either the fields of physical therapy, occupational therapy or speech/language pathology. It is anticipated that this program will attract a number of students from across Tennessee and neighboring states.

Why is establishing this program an institutional priority at this time?

The changing organization, financing, and priorities of the health care system are creating new imperatives for interdisciplinary teamwork. The Bachelor of Science in Rehabilitative Science program will draw upon the expertise of faculty from Audiology and Speech/Language Pathology, Physical Therapy, Cardiopulmonary Sciences, Nutrition and Radiography. As part of the premier Academic Health

Sciences Center in East Tennessee, the College of Clinical and Rehabilitative Health Sciences is well positioned to provide students a unique opportunity for undergraduate interdisciplinary teaching and learning. Through exposure to faculty and students of varied interests and disciplines, students can gain insights into various areas of rehabilitative science, receive ongoing counseling and guidance from faculty members of their chosen discipline, identify potential careers that match their interests, strengths, and goals, and take courses with an interdisciplinary perspective that will allow them to explore the broader social and economic impact of their career choices. The proposed program addresses the nation's growing and continuing need for broadly trained individuals in rehabilitative services in order to optimize the role of rehabilitation in the transformation of the health care delivery system.

List newly approved and established programs (within the same CIP classification) at the same degree level offered at other public institutions in Tennessee.

There are no other undergraduate degree programs in rehabilitative science in the State of Tennessee. Many colleges and universities throughout Tennessee do, however, offer pre-professional (pre-SLP, pre-PT, pre-OT, etc.) programs that provide guidance to students as they prepare for graduate study in a specific discipline. They are often concentrations within other majors, such as public health, communication, biology, exercise science, health sciences, and physical education. The proposed program is unique in that it provides students ongoing access, through both formal and informal mechanisms, to faculty from a number of different health-related occupations. The degree combines core courses with a major curriculum specifically designed to meet the needs of students entering the fields of speech/language pathology, audiology, occupational therapy, physical therapy, and physician assistant. Further, the proposed program will provide a pathway to a wide range of career options in health or rehabilitation fields. Those students who are unable or elect not to go on to graduate school will graduate with employment options that include, in addition to those listed previously, developing and running health education and community programs.

Diversity

East Tennessee State University recognizes that the pursuit of knowledge and understanding is enriched by an environment in which people of diverse backgrounds learn together and from each other, and participate in free and genuine exchange of views. It recognizes that all members of the University community benefit from diversity and that the quality of learning, research, scholarship and creative activities is enhanced by a campus climate of inclusion, understanding, and appreciation of differences and the full range of human experience. ETSU must prepare students to function successfully in a diverse society. A university diverse in its people, curricula, scholarship, research, and creative activities expands opportunities for intellectual inquiry and engagement, helps students develop critical thinking skills, and prepares students for social and civic responsibilities.

The Clinical and Health Rehabilitative Sciences recognizes the variety of personal experiences, values, and worldviews that arise from differences of culture and circumstance and seeks to admit a diverse student body. Additionally the curriculum supports global awareness and appreciation of diversity through required courses containing specific content related to health and well-being of global populations and cultures.

Enrollment/Productivity

The enrollment projection is based on four factors: 1) the number of entering students (both first time freshmen as well as transfer students) from 2008 to 2013 who declared pre-physical therapy, pre-occupational therapy, or pre-speech/language pathology as a focus of their undergraduate study, 2) results of a survey sent to currently enrolled undergraduate students studying in or working toward a degree in health professions and 3) enrollment information from other institutions offering a Bachelor of Science in Rehabilitative Science and 4) the number of students currently enrolled in graduate programs in Rehabilitative Science at ETSU that received undergraduate degrees from other regional universities or colleges within a 200-mile radius.

The program expects to initially enroll 25 students, add 15 students during the second year and 10 students over the next two years, and remain at 60 students during years 4 and 5. It is also anticipated to see an increase in part-time enrollment starting with seven students and increasing by four additional students in years 2 and 3, and reaching 18 part-time students in years 4 and 5.

A current analysis of enrollment data in the ETSU Speech/Language Pathology and Physical Therapy programs indicate that from 28 (44%) to 32 (50%) of the students matriculating in 2013 and 2014 obtained their bachelor's degree at other colleges within the region. The development of this program will make it more attractive for these students to enroll at ETSU for their undergraduate degrees.

Year	Full-Time Headcount	Part-time Headcount	Total Year Headcount	FTE	Graduates
1	25	7	32	27.8	0
2	40	11	51	44.4	0
3	50	15	65	56.0	0
4	60	18	78	67.20	15
5	60	18	78	67.20	20

Method used to Support Enrollment Numbers: History and Surveys

The number of students who have declared pre-occupational therapy and pre-physical therapy upon entering the university over the past five years and the existing enrollment in the speech/language pathology minor was used to project headcount. Headcount calculation was based on an annual enrollment of 25 students during the first 5 years of the program. An attrition rate of 40% was factored

into the first year freshman enrollment numbers of each incoming class based on the university's current retention data.

Results of a survey sent to presently enrolled students indicated that 40% of current undergraduate students who declared pre-physical therapy, pre-audiology or pre speech/language pathology and 52% of current graduate students in audiology, speech/language pathology and physical therapy would have chosen the major in Rehabilitative Science had it been an available option (Appendix B).

Eight colleges and universities that offer a Bachelor of Science in Rehabilitative Science were contacted about the number of students they enroll and the number of graduates per year. Five of them responded. Two indicated they didn't have access to the numbers and three gave the information they had. The responders used their admissions data for the current year only.

Institution	Full time freshman students enrolled each year	Graduates per year
University of Pittsburgh	80	80 ± 2
Concordia University	30-40	30-40

Method Used to Support Enrollment Numbers: Calculations

Calculations are based on total of credits for academic year full-time and part-time students divided by 30 (15 per semester) to obtain FTEs. It is assumed that full-time students in this degree program will take 17 credit hours and part-time students will take six credits. The following calculations are based on these assumptions.

Year 1	Year 2	Year 3	Year 4	Year 5
Fall: 25 x 15 = 375 Spr: 25 x 15 = 375 Subtotal FT: 750 Fall: 7 x 6 = 42 Spr: 7 x 6 = 42 Subtotal PT: 84 FT+PT = 834 834/30 = 27.8 FTE	Fall: 40 x 15 = 600 Spr: 40 x 15 = 600 Subtotal FT: 1200 Fall: 11 x 6 = 66 Spr: 11 x 6 = 66 Subtotal PT: 132 FT+PT = 1332 1332/30 = 44.4 FTE	Fall: 50 x 15 = 750 Spr: 50 x 15 = 750 Subtotal FT: 1500 Fall: 15 x 6 = 90 Spr: 15 x 6 = 90 Subtotal PT: 180 FT+PT = 1680 1680/30 = 56.0 FTE	Fall: 60 x 15 = 900 Spr: 60 x 15 = 900 Subtotal FT: 1800 Fall: 18 x 6 = 108 Spr: 18 x 6 = 108 Subtotal PT: 216 FT+PT = 2016 2016/30 = 67.20 FTE	Fall: 60 x 15=900 Spr: 60 x 15=900 Subtotal FT: 1800 Fall: 18 x 6 = 108 Spr: 18 x 6 = 108 Subtotal PT: 216 FT+PT = 2016 2016/30 = 67.20 FTE

Curriculum

Learning Outcomes

At the conclusion of the program of study, the student is expected to

1. Articulate and discuss the professional ethics and standards of behavior in Rehabilitative Science.
2. Describe the theories and principles of interprofessional practices as they apply to Rehabilitative Science professions.
3. Differentiate among the scopes of practice of Rehabilitative Science professions.
4. Understand the principles of evidence-based practice in the Rehabilitative Science professions.
5. Communicate effectively orally and in writing on a variety of topics related to Rehabilitative Science.

Admission

Admission requirements for this program are congruent with the general admission requirements for ESTU. <http://catalog.etsu.edu/content.php?catoid=1&navoid=15>

Curriculum Structure

The proposed degree requires completion of 120 semester credit hours distributed as follows:

<u>Curriculum Component</u>	<u>Hours</u>
General Education	41-42
Major Science Core	24
Major Field	31
Guided Electives	05- 06
Minor	18
Other	
TOTAL:	120

No. of new courses: 10 with 31 credit hours

Appendix C, Programs of Study by Concentration, contains the semester by semester advising guidelines for the program.

1. General Education (41-42 credits)

Rubric	Number	Course Title	Credits
ENGL	1010	Critical Reading & Expository Writing	3
ENGL	1020	Critical Thinking & Argumentation	3
		Oral Communication	3
		Literature Elective	3
		Fine Arts Elective	3
		Humanities Elective	3
PSYC	1310	Introduction to Psychology	3
HDAL	2310	Development Psychology	3
HIST	2010	The United States to 1877	3
HIST	2020	The United States since 1877	3
HSCI	2010	Anatomy and Physiology I	4
HSCI	2011	Anatomy and Physiology Laboratory I	0
HSCI	2020	Anatomy and Physiology II	4
HSCI	2021	Anatomy and Physiology Laboratory II	0
		Mathematics	3-4

2. Major Science Core (24 credits)

Rubric	Number	Course Title	Credits
BIOL	1110/11	Biology for Science Majors I	4
BIOL	1120/21	Biology for Science Majors II	4
CHEM	1110/11	General Chemistry I	4
CHEM	1120/21	General Chemistry II	4
PHYS	2010/11	General Physics I	4
PHYS	2020/21	General Physics II	4

3. Major Field (31 credits)

(31 credits)			
Rubric	Number	Course Title	Credits
RHSC	3000	Intro to the Rehabilitative Professions	3
RHSC	3200	Interprofessional Practice in Healthcare	3
RHSC	3500	Rehabilitative Professions in Practice	4
RHSC	3600	Ethics in Rehabilitative Science	3
RHSC	3750	Introduction to Technology and Rehabilitation	3
RHSC	4000	Psychosocial Aspects of Rehabilitative Science I	3
RHSC	4100	Rehabilitative Disabilities Across the Lifespan	3
RHSC	4200	Administrative Principles in Rehabilitative Management	3
RHSC	4500	Psychosocial Aspects of Rehabilitative Science II	3
RHSC	4700	Introduction to Research in the Rehabilitative Science	3

4. Guided Electives (6 credits)

(6 credits selected with advisor)			
Rubric	Number	Course Title	Credits
PSYC	4320	Abnormal Psychology	3
COBH	2750	Medical Terminology	3
BSTA	3000	Biostatistics	3
PEXS	3610	Exercise Physiology I	3
PEXS	4620	Exercise Physiology II	3
HDAL	2510	Introduction to Human Services	3
HDAL	4330	Family Management Through the Lifespan	3

5. Minor (18 credits)

Students will work with their academic advisor to choose a minor that fits their career path.

COURSE DESCRIPTIONS FOR MAJOR FIELD COURSES

CORE (31 credits)		
Course and Title	Description	Credits
RHSC 3000 Introduction to the Rehabilitative Professions	Introduction to the rehabilitative professions with emphasis on audiology, speech/language pathology, physical therapy, and occupational therapy. An overview of the discipline of rehabilitative science is presented including definitions and domains of rehabilitative science and the contributions of rehabilitative science to improving health and health care.	3
RHSC 3200 Interprofessional Practice in Healthcare	Introduction to definitions, concepts and competencies associated with interprofessional and interdisciplinary practice in rehabilitation. Emphasizes the concepts of disability, wellness and health care from inter-disciplinary and interprofessional perspectives.	3
RHSC 3500 Rehabilitative Professions in Practice	Promote knowledge for students in health professions and sciences to develop competencies across a range of disciplines. Through laboratory experiences and onsite observations of clinicians in practice students integrate multiple perspectives and critically articulate fundamental principles underlying each discipline.	4
RHSC 3600 Ethics in Rehabilitative Science	Course focuses on personal values, and field related professional guidelines on ethics. Use of case study examples to help students critically think and deal with ethical dilemmas.	3

CORE (31 credits)		
Course and Title	Description	Credits
RHSC 3750 Introduction to Technology & Rehabilitation	The impact of assistive and information technology on education, practice and research in rehabilitative sciences. Application of interprofessional perspectives to examination of issues and problems associated with technology in rehabilitative sciences.	3
RHSC 4000 Psychosocial Aspects of Rehabilitative Science I	Biopsychosocial environmental models of health applied to issues in rehabilitation. Identification of cognitive, functional and vocational limitations of medical disabilities from a psychosocial perspective.	3
RHSC 4100 Rehabilitative Disabilities Across the Lifespan	Overview of the physical, social, emotional and cognitive changes that occur across the lifespan. Examination of common disabling conditions that typically begin in certain stages for individual, group and systemic impacts together with exploration of resources to assist individuals of all ages with disabilities.	3
RHSC 4200 Administrative Principles in Rehabilitative Management	Overview of rehabilitative organizations with emphasis on an understanding of and appreciation for the factors that affect a client's entry into and progression through the healthcare system, including the effect of current financial, legal and regulatory policies that affect the client, the client/professional relationship, and rehabilitative care.	3
RHSC 4500 Psychosocial Aspects of Rehabilitative Science II	Builds on psychosocial issues I with an emphasis on chronic pain, abuse, neglect, and the impact of each on the coordination of services in rehabilitation.	3
RHSC 4700 Introduction to Research in the Rehabilitative Science	Theoretical and practical training in basic skills utilized in basic rehabilitative science research laboratories focusing on the process of conducting and evaluating research, and trends in the short history of evidence-based practice in rehabilitative science fields.	3

Identify number of required hours for the program:

120 Semester Credit Hours

Project the date for program accreditation (where applicable)

N/A

Identify the delivery methods for the program.

Electronic ☐ Traditional ☒ Combined

Provide a rationale for the delivery mode(s).

In order to support fulfilling the need to provide wider access across the state to higher education opportunities, courses will be offered in online, traditional, and blended-delivery formats. The modes of delivery for online courses will include synchronous and asynchronous modes. The online delivery of course work will be in the current eLearn format available at ETSU. Synchronous online classes will utilize programs such as Adobe Connect Pro, Wimba, and Camtasia. These technologies increase the quality of course offerings, enable courses to be delivered more efficiently, and provide opportunities to teach new groups of students or existing students in more flexible ways. A 2009 meta-study from the Department of Education found that students taking online courses outperformed their peers in traditional classrooms

(<http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>).

For undergraduate degree programs, describe the articulation and transfer avenues projected for the proposed program in compliance with PC § 49-7-202.

There is a common core of fully transferable general education courses among all TBR institutions. The current articulation and transfer agreements at ETSU encompass multiple community college articulation agreements. Students can meet the requirements for the first two years of an ETSU bachelor's degree with courses obtained at another college by following the transfer plan outlined in the agreement between ETSU and the colleges listed on the ETSU website at <http://www.etsu.edu/articulation/agreements/>.

Resources

Current Faculty

Name	Degree	Discipline	Credits	FTE
Mary Jo Davenport	PhD	Biomedical Sciences	3	.10
Chayadevie Nanjundeswaran	PhD	Communication Sciences and Pathology	3	.10

Estimated Additional Full-time Faculty for the Proposed Program

Calendar	Degree	Discipline	Credits	FTE
Year 1	PhD	Speech & Language Pathology/Physical Therapy/Occupational Therapy	24	1.0
Year 2	PhD	Speech & Language Pathology/Physical Therapy/Occupational Therapy	24	1.0

The normal undergraduate teaching load in the College of Clinical & Rehabilitative Health Sciences is 12 hours in instructional load per semester, with an additional 3 hours in combined clinical teaching, service and research. The college is projecting that it will be necessary to offer multiple sections of selected courses starting in year two of the program.

Graduate Assistants for the Proposed Program

Students who have received a Graduate Assistantship in the Ph.D. Program in Rehabilitative Sciences will teach as part of their Graduate Assistantship.

Staff for the Proposed Program

No additional staff will be required.

Resources: Within Department

Departmental physical resources are sufficient to sustain the additional demands of the proposed program.

Resources: Library (Describe existing and needed)

The Sherrod Library at East Tennessee State University provides access to discipline-specific resources to support the proposed Bachelor of Science program in Rehabilitative Science. Collection adequacy is demonstrated through holdings reviews and reviews of course-level recommended and supplemental materials. For items that are not held in the library, students and faculty have seamless automated access to interlibrary loan services, with no per-request fee. Departments may request specific book, journal or database acquisitions to support the discipline. No additional Library Resources are needed, but the collections and supplemental materials will be continually reviewed by the Institution. See Appendix D for ETSU current library resources.

Resources: Information Technology (Describe existing and needed)

Resources of the Office of Information Technology and Academic Technology Support are currently adequate. The ETSU Help Desk assures both faculty and staff that immediate assistance is available for trouble-shooting and problem solving. Fully equipped smart classrooms are available for instruction. Academic Technology Support staff is readily available for assistance with D2L and the myriad applications of technology for delivery of course content, including streaming audio and video for instructional support for each College. No further resources are needed for information technology.

Resources: Facilities and Equipment (Describe existing and needed)

There are sufficient college and departmental facility and equipment resources to meet to meet the program needs.

Student Services: Student Advising (describe how the program will support student advising)

The College of Clinical and Rehabilitative Health Sciences has a fulltime academic advisor who currently works with students pursuing graduate admissions into rehabilitative science programs. Development of the proposed academic degree will increase student interaction with the college advisor in that students will have a single advisor for both undergraduate and professional school as opposed to multiple advisors across multiple colleges. Additionally, because the college advisor will have regular meetings with the undergraduates, as opposed to a few sporadic meetings, the advisor will have the opportunity to become more familiar, and to forge more long-standing relationships, with the students interested in applying to the college's graduate programs.

Describe the anticipated effect the program will have on existing associated degree programs or concentrations within the institution.

Students are not required to select a particular major in order to be eligible for admission to graduate programs in Speech & Language Pathology, Occupational Therapy, or Physical Therapy. The most common undergraduate majors include exercise science, biology, and psychology, all of which currently exist at ETSU. The proposed degree will provide students an additional option. Given the variety of major choices, the impact on any one existing degree program will be minimal.

There are no other bachelor's degree programs in Rehabilitative Science in place at ETSU. The positive aspects of the proposed program include increased student exposure to rehabilitation professions, increased number of faculty, increased membership in student organizations, and other outcomes which benefit the university as a whole. Increased fees from the increased student enrollment will allow further expansion of labs and specialized equipment which are shared by allied health programs across the college.

Financial Projections

The following one-time expenditures and recurring expenses are presented.

One-time Expenditures

Item	Cost Summary
New/Renovated Space	No new or renovated space is required.
Equipment	No new equipment is required.

Recurring Expenditures:

Item	Cost Summary	Summary
Faculty Salary	<p>In year 1, a faculty member will be hired for \$82,000. Salary in the following years is based on a 3% increase each year.</p> <p>In year 2, an additional faculty member will be hired for \$82,000. Salary in the following years is based on a 3% increase each year.</p>	Therefore, the faculty salary totals are \$82,000 in year 1, \$166,460 in year 2, \$171,454 in year 3, \$176,597 in year 4, and \$181,895 in year 5.
Faculty Benefits	Benefits are calculated as 20% of salary plus \$11,270 in year 1; therefore, the benefits for the first faculty member hired in year 1 would be \$27,670 in the first year and increasing each year as the salary increases. Benefits for the second faculty member hired in year 2 for would be \$27,670 and increase each year as the salary increases.	Therefore, the total faculty benefits would be \$27,670 in year 1, \$55,832 in year 2, \$56,831 in year 3, \$57,859 in year 4, and 58,919 in year 5.
Faculty Summary	The total faculty costs, including salary and benefits, are \$109,670 in year 1, \$222,292 in year 2, \$228,285 in year 3, \$234,457 in year 4, and \$240,814 in year 5.	
Operating	<p>In years 1 through 5, travel expenses are estimated to be \$2,000 each year.</p> <p>In years 1 through 5, printing costs for brochures and advertising plus other costs are estimated to be \$900 each year.</p>	<p>\$10,000 for years 1-5</p> <p>\$ 4,500 for years 1-5</p>

Revenues

THEC Financial Estimate: Revenue Summary

	Year 1	Year 2	Year 3	Year 4	Year 5
Tuition and Fees	\$202,259	\$338,400	\$447,908	\$563,289	\$590,433
Institutional Reallocations	(89,689)	(113,208)	(216,723)	(325,932)	(346,719)
Balanced Budget Line	\$ 112,570	\$225,192	\$231,185	\$237,357	\$243,714

Year	Students	ETSU	Academic Health Science Fees
1	25FT 7PT	\$193,642	\$8,617
2	40FT 11PT	\$324,628	\$13,762
3	50FT 15PT	\$430,550	\$17,358
4	60FT 18PT	\$542,460	\$20,829
5	60FT 18PT	\$569,604	\$20,829

These numbers added together will total the THEC revenue line.

The AHSC fees will be used to partially fund one of the two requested positions.

Provide evidence of non-state funds (gifts, grants, awards) available to meet start-up costs.

N/A

Provide a rationale for reallocation of budgeted funds.

N/A

Institutions should cite THEC annual degree productivity data if funds are to be redirected from closed low-producing programs.

N/A

Program Development Plans and Resource Commitments

List the institution's active Letters of Intent

B.F.A. Graphic Design
 B.S.E. Engineering
 D.N.P. Nursing Practice
 B.A. Dance
 D.N.P. Graduate Certificates

List programs that are in Post Approval Monitoring and are failing to meet benchmarks

Ph.D. in Early Childhood Education

List low-producing programs at all levels

Women's Studies	BA
Economics	BA
Geography	BS
International Affairs	BA
Interior Design	BS
Theatre	BA
Environmental Health	BSEH

Economics	BBA
Educational Leadership	MED
Environmental Health	MSEH
Allied Health	MS
Psychology	PHD
Public Health	DRPH
Environmental Health	PHD

List programs terminated within the last 12 months

N/A

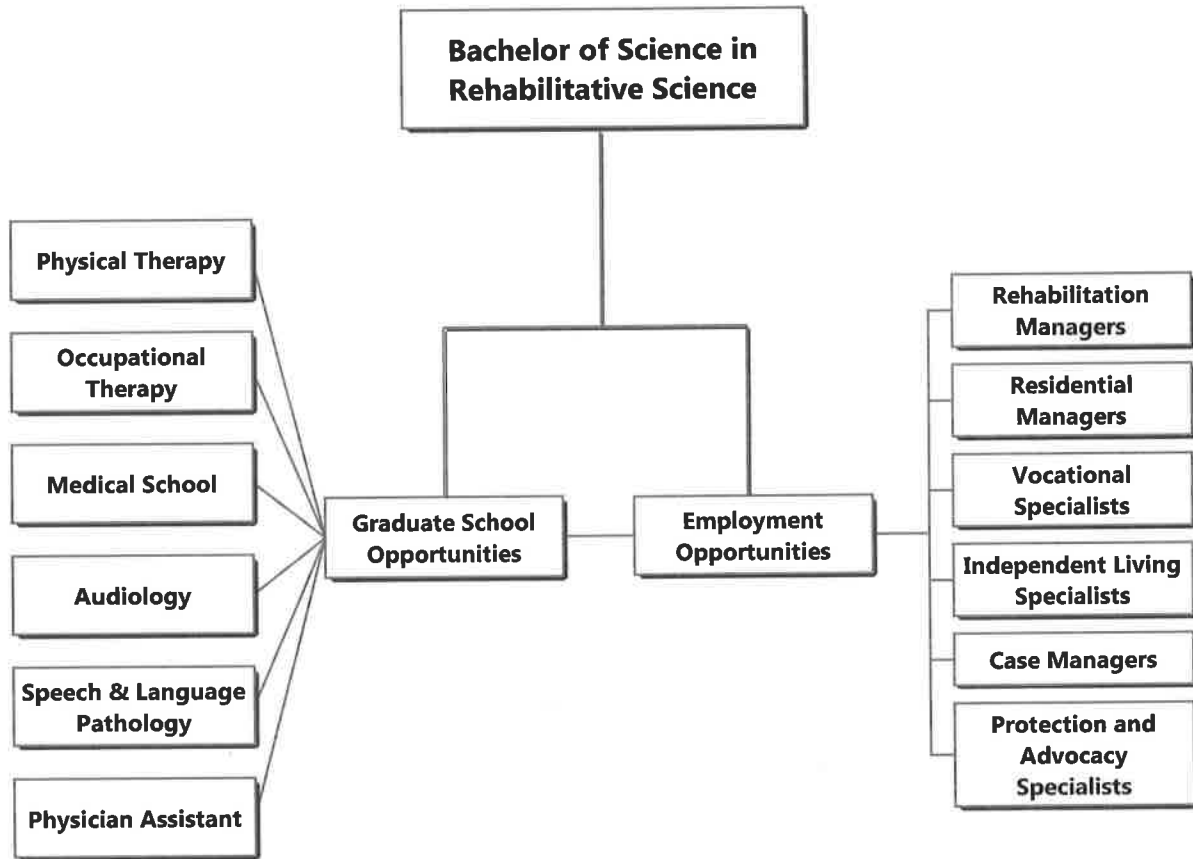
List the projected data for submission of the full proposal and the target date for Board approval.

The full proposal will be submitted no later than January 2017 with target dates for TBR Board approval in May 2017 and THEC Board approval in June 2017.

List the projected date for implementation of the proposed program.

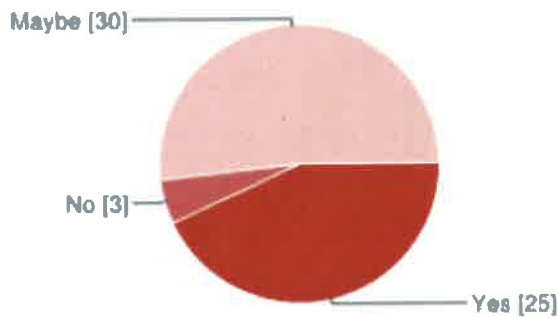
Fall 2017

Appendix A
Opportunities for Graduates



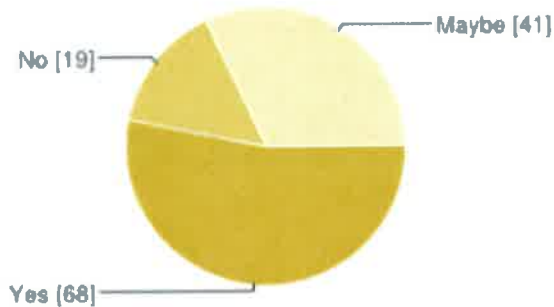
Appendix B
Results of Survey to Current Students in the College of Clinical and Rehabilitative Health Sciences

Undergraduate Students – Would you choose to major in “Rehabilitative Sciences” if that became an option to you during your undergraduate program of study?



Yes	25	43%
No	3	5%
Maybe	30	52%

Graduate Students – Would you have chosen to major in “Rehabilitative Sciences” if that was an option when obtaining your undergraduate degree?



Yes	68	53%
No	19	15%
Maybe	41	32%

Appendix C
Four-year Program of Study

Fall Semester	Hrs.	Spring Semester	Hrs.
ENGL 1010 Critical Reading and Expos. Writing	3	ENGL 1020 Critical Thinking & Argumentation	3
MATH 1530 Probability & Statistics (noncalculus)	3	HSCI 2020/21 Anatomy Physiology II & Lab	4
HSCI 2010/11 Anatomy Physiology I & Lab	4	SPCH 1300 General Speech	3
PSYC 1310 Introduction to Psychology	3	BIOL 1120/21 Biology for Science Majors I & Lab	4
BIOL 1110/11 Biology for Science Majors I & Lab	<u>4</u>	Fine Arts Elective	<u>3</u>
	17		17
Fall Semester	Hrs.	Spring Semester	Hrs.
HIST 2010 The United States to 1877	3	HIST 2020 The United States Since 1877	3
CHEM 1110/11 General Chemistry I	4	CHEM 1120/21 General Chemistry II	4
HDAL 2310 Developmental Psychology	3	RHSC 3000 Introduction to the	3
Literature Elective	3	Rehabilitative Professions	<u>3</u>
Humanities Elective	<u>3</u>	Guided Elective	13
	16		
Fall Semester	Hrs.	Spring Semester	Hrs.
PHYS 2010/11 General Physics I	4	PHYS 2020/21 General Physics II	4
RHSC 3500 Rehabilitative Professions in Practice	4	RHSC 3600 Ethics in Rehabilitative Science	3
RHSC 3200 Interprofessional Practice in Healthcare	3	RHSC 3750 Introduction to Technology & Rehabilitation	3
Minor Course	3	Minor Course	<u>3</u>
Minor Course	<u>3</u>		13
	17		
Fall Semester	Hrs.	Spring Semester	Hrs.
RHSC 4000 Psychosocial Aspects of Rehabilitative Sciences I	3	RHSC 4500 Psychosocial Aspects of Rehabilitative Science II	3
RHSC 4100 Rehabilitative Disabilities Across the Lifespan	3	RHSC 4700 Introduction to Research in the Rehabilitative Science	3
RHSC 4200 Administrative Principles in Rehabilitative Management	3	Minor Course	3
Guided Elective	3	Minor Course	<u>3</u>
Minor Course	<u>3</u>		12
	15		
		TOTAL HOURS	120

Appendix D
Library Adequacy for Proposed Bachelor of Science in Rehabilitative Science

Library collections are deemed adequate in this field, and holdings are delineated below.

Databases currently available through ETSU's libraries

CINAHL with Full Text
PubMed
Cochrane Controlled Trials, Systematic Reviews, Methodology Register
Stat!Ref
Community of Science
Web of Science
Dissertation and Theses Full Text
Science Direct
Health and Wellness Resource Center
Health Technology Assessments
PsychArticles
PsychInfo
R2Digital Library
ERIC
Education Complete
ABI/INFORM Complete
InfoTrac General OneFile
Wilson Omnifile

eJournals currently available through ETSU's Libraries

Sherrod Library and the ETSU College of Medicine Library provide access to over 5,000 eJournals in the health sciences. Approximate number of journals in fields related to Rehabilitative Science are listed below:

Audiology - 7
Occupational Therapy (see also therapeutics)-9
Physical Therapy (see also therapeutics)-18
Physiotherapy-29
Rehabilitative Medicine/Physical Rehabilitation-51
Speech Language Pathology-34
Therapeutics-199
Healthcare administration and management - 30

Selected Book, eBook, and Media Resources currently available through ETSU's Libraries

The following bibliography lists resources focused on research, pedagogy, and leadership in the Rehabilitative Science held in the ETSU Libraries (both Sherrod and Medical Libraries) as well as general resources on the broad category of rehabilitative studies. Library collections on the medical aspects of physical therapy, occupational therapy, speech language pathology, audiology, and rehabilitative

counseling are also available in support of this program but are not listed in this bibliography. Strong collections in health care fields such as nursing and public health would also be of use to students and faculty in these programs.

- The 21st century health care leader. (1999). San Francisco: Jossey-Bass. [Sherrod RA971.A12 1999]
- Achieving evidence-based practice: A handbook for practitioners. (2009) New York: B. Tindall. [Sherrod RA427.9.A26 1999]
- Austin, M. J., Ahearn, F. L., & English, R. A. (Eds.). (1997). The professional school dean: Meeting the leadership challenges. San Francisco: Jossey-Bass. [Sherrod LB2331.72 .N48 no. 98]
- Bailey, D.M. & Schwartzberg, S.L. (Eds.) (1995). Ethical and legal dilemmas in occupational therapy. Philadelphia: F.A. Davis. [COM WB555 E84 1995]
- Banta, T. W. (Ed.). (1996). Assessment in practice: Putting principles to work on college campuses (1st ed.). San Francisco: Jossey-Bass. [Sherrod LB2366.2.A88 1996]
- Barnard, A. (2011). Key themes in health care: A companion to learning. London: Routledge. [Sherrod eBooks]
- Bodenheimer, T. (2009). Understanding health policy: A clinical approach. New York: McGraw-Hill Medical. [Sherrod eBooks]
- Braveman, B. (2006) Leading and managing occupational therapy series: an evidence-based approach. Philadelphia: F.A. Davis. [Sherrod eBooks]
- Brownlie, J., Greene, A., Howson, A. (2008). Researching trust and health. New York: Routledge. [Sherrod eBooks]
- Byram, M., Nichols, A., & Stevens, D. (2001). Developing intercultural competence in practice. Clevedon, England ; Buffalo, N.Y.: Multilingual Matters. [Sherrod eBooks]
- Charns, M.P. & Tewksbury, L.J. (1993). Collaborative management in health care: implementing the integrative organization. San Francisco: Jossey-Bass. [Sherrod RA971.C517 1993]
- Chatburn, R. (2011). Handbook for health care Research. Jones & Bartlett. [ETSU R2 Digital Library]
- Creating knowledge-based healthcare organizations. Hershey, PA: Idea Group. [Sherrod eBooks]
- Currier, D.P. (1990). Elements of research in physical therapy. [COM WB25 C976e 1990]
- Dowling, S. (2001). Supervision: Strategies for successful outcomes and productivity. Boston: Allyn and Bacon. [Sherrod RF291 .D69 2001]
- Dreeben, O. (2010). Patient education in rehabilitation. Jones and Bartlett Learning. [ETSU R2 Digital Library]
- Evidence-based practice: a critical appraisal. (2000) Oxford: Blackwell Science. [Sherrod eBooks]
- Evidence-based practice: a primer for health care professionals. (2005). New York: Elsevier/Churchill Livingstone. [Sherrod eBooks]
- Evidence-based clinical practice: Concepts and approaches. (2000). Boston: Butterworth-Heinemann. [COM WB102.E92 2000]
- Evidence-based health economics: From effectiveness to efficiency. (2002) London: BMJ Books. [Sherrod eBooks]
- Falvo, D. (2011). Effective patient education. Jones & Bartlett. [ETSU R2 Digital Library]
- Greenhalgh, T. (2010) How to read a paper: the basics of evidence-based medicine. (4th ed.) Wiley-Blackwell. [ETSU R2 Digital Library]
- Handbook of teaching for physical therapists. (1997). Boston: Butterworth-Heinemann. [COM WB18 H236 1997]
- Hicks, C. M. (1999). Research methods for clinical therapists: Applied project design and analysis. New York: Churchill Livingstone. [COM WB460 H631r 1999]
- Jordan-Marsh, M. (2013) Health technology literacy. Jones & Bartlett. [ETSU R2 Digital Library]

Kaplan, S.L. (2007) Outcome measurement and management: First steps for the practicing clinician. Philadelphia: F.A. Davis. [Sherrod eBooks]

Kastania, A. & Mourntzoglou, A. (2011). E-health systems quality and reliability: Models and standards. Hershey, PA: Medical Information Science Reference. [Sherrod eBooks]

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